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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/760,486

01/21/2004

Shinji Tani

06-004

9788

23400

7590

06/09/2005

POSZ LAW GROUP, PLC  
12040 SOUTH LAKES DRIVE  
SUITE 101  
RESTON, VA 20191

EXAMINER

PHILOGENE, HAISSA

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/760,486

Applicant(s)

TANI ET AL.

Examiner

Haissa Philogene

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) 4, 6, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/21/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: In page 2, line 11, change "2002" to --2001--. In page 5, line 20, change "ON" to --AND--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tonar et al., Patent No. 6,700,692.

Tonar discloses in Fig.26 a control device of LEDs comprising driving means (908) for driving LEDs (902), and pulse output means (900) for varying, of a pulse signal (904) outputted to the driving means (908), a cycle and a corresponding duty ratio, to control the driving means, as the pulse output means or control circuit (908) varies the duty cycle of PWM signal (904) ( See also Col.49, lines 45-47 and 54-60).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tonar et al in view of Eggers, Patent No. 5,929,568.

Tonar discloses the claimed invention substantially as explained above. Further, Tonar discloses luminance variation characteristic of LEDs (see also Col.50, lines 2-9) and that the use of electric bulbs is also applicable (see Col.67, lines 1-2). Tonar does not explicitly disclose the luminance variation characteristic of the LEDs being approximated to a luminance variation characteristic of the electric bulb. However, this feature is well known in the art as evidenced by Eggers which discloses in Figs. 3-6 a control device wherein a luminance variation characteristic of the LEDs (40) is approximated to a luminance variation characteristic of the electric bulb (42) at voltages equal to 12V and 26.5V (Fig.5). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the approximation of both the LEDs and the electric bulb luminance variation characteristics as taught by Eggers into the Tonar type device, because it would allow the LEDs to be substituted for electric bulbs, thereby producing less heat, operating for a longer life, being less prone to failure in high vibration environments and consuming less power.

Claim 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tonar et al in view of Okamoto, JP 2001-244087.

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Tonar discloses the claimed invention substantially as explained above. Tonar further discloses variation in duty cycle (readable as increased or decreased) of the PWM signal (904) leading to gradual variation in brightness levels (see Col.49, lines 45-47, 54-60; Col.50, lines 2-9 and 34-37). Tonar does not explicitly disclose lighting-up means that gradually increases the cycle and the corresponding duty ratio during a lighting-up period of the LEDs since lighting-up of the LEDs starts and lighting-out means that gradually decreases the cycle and the corresponding duty ratio during a lighting-out period of the LEDs since lighting-out of the LEDs starts. Okamoto discloses in Figs. 1 and 2 a control device having a pulse output means (A1) (as lighting-up means) that provides a gradual increase in duty ratio during a lighting-up period (H level) since lighting-up of the LEDs starts, i.e., when receiving a H level lighting signal C and the pulse output means (A1) (as lighting-out means) that provides a gradual decrease in duty ratio during a lighting-out period since lighting-out of the LEDs starts, i.e., when receiving a L level lighting signal C (see paragraphs 0013-0016). It would have been obvious to person having ordinary skill in the art at the time the invention was made to employ the lighting-up and lighting-out means as taught by Okamoto into the Tonar type device, because it would allow a mitigation of visual fatigue and improvement in the visibility and also a simplified circuit with reduction in power consumption.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tonar in view of Okamoto as applied to claims 1, 3 and 5 above, and further in view of Tsuchida et al., Patent No. 4,438,425.

Tonar in view of Okamoto discloses the claimed invention substantially as explained above except for the lamp signal being generated when a switch of the turning signal is operated. Tsuchida discloses in Fig.4 a control device of LEDs (11A-11F) used in a turning signal lamp of a vehicle having a lamp signal being generated by circuit (23) when a switch of the turning signal (20, 21) is operated. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the turn signal switch as taught by Tsuchida into the Tonar in view of Okamoto type device, because it would allow lamp signals which are based on a multiple signal transmitting apparatus used for vehicles, thereby improving the efficacy of the device.

#### ***Allowable Subject Matter***

Claims 4, 6, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Koharagi et al., Patent No. 6,844,760 ; Kim, Patent No. 6,661,428 ; Hoshino et al., Patent No. 6,628,252; Sakura et al., Patent No. 6,724,376.

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***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 6:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hp

Haissa Philogene  
Primary Examiner  
A.U. 2828  
